

CLAIMS

What is claimed is:

- 1 1. A method, comprising:
 - 2 a. converting a television broadcasting signal into a digitized video signal;
 - 3 b. separating luminance information and chrominance information of the
 - 4 digitized video signal in a dimension that has a constancy value below a
 - 5 predetermined threshold level; and
 - 6 c. optionally converting the separated luminance information and chrominance
 - 7 information into a first output format, wherein the first output format
 - 8 conforms to input requirements of a display apparatus.
- 1 2. The method according to claim 1, further comprising:
 - 2 calculating the constancy value in a horizontal dimension (hereinafter H
 - 3 constancy value), a vertical dimension (hereinafter V constancy value) and a
 - 4 temporal dimension (hereinafter T constancy value).
- 1 3. The method according to claim 2, further comprising:
 - 2 a. sampling the video signal at an integer multiple of a frequency of a
 - 3 chrominance sub-carrier to generate digitized samples; and
 - 4 b. storing a number of the digitized samples in a storage medium.

6. The method according to claim 3, further comprising:
measuring an absolute value between a first digitized sample and a second digitized sample to establish the T constancy value, wherein the first digitized sample is in a particular position within a first frame, the second digitized sample is in the same particular position within a second frame, and the first frame and the second frame have same phases of the chrominance sub-carrier.

1 7. The method according to claim 1, further comprising:
2 selecting an appropriate filter to perform the separating based on the constancy
3 value.

1 8. A computer-readable medium including a plurality of instructions readable
2 therefrom, the instructions, when executed by a computer system, cause the
3 computer system to perform operations comprising:
4 a. converting a television broadcasting signal into a digitized video signal;
5 b. separating luminance information and chrominance information of the
6 digitized video signal in a dimension that has a constancy value below a
7 predetermined threshold level; and
8 c. optionally converting the separated luminance information and chrominance
9 information into a first output format, wherein the first output format
10 conforms to input requirements of a display apparatus.

1 9. The machine readable medium according to claim 8, the instructions further
2 comprising:
3 a. sampling the video signal at an integer multiple of a frequency of a
4 chrominance sub-carrier to generate digitized samples; and

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- b. a processor coupled to the bus;
- c. a system controller coupled to the bus;
- d. a storage medium coupled to the system controller; and
- e. an improved video decoder, further comprising:
 - i. an analog-to-digital converter, coupled to the bus, to convert a television broadcasting signal into a digitized video signal and store digitized samples of the digitized video signal in the storage medium;
 - ii. a constancy detector, coupled to the analog-to-digital convert, to determine a constancy value in a horizontal (hereinafter H constancy value), vertical (hereinafter V constancy value) and temporal (hereinafter T constancy value) dimension;
 - iii. a luminance/chrominance separation engine, coupled to the constancy detector, to separate luminance information and chrominance information of the digitized video signal; and
 - iv. a display encoder, coupled to the luminance/chrominance separation engine, to optionally convert the separated luminance information and chrominance information into a first output format, wherein the first output format conforms to input requirements of a display apparatus.

1 19. The apparatus according to claim 17, the constancy detector further measures an
2 absolute value between two of the digitized samples on a same scan line that have
3 same phases of the chrominance sub-carrier to establish the H constancy value.

